

This review sheet is intended to cover everything that could be on the exam; however, it is possible that I will have accidentally left something off. You are still responsible for everything in the chapters covered except anything that I explicitly say you are not responsible for. Therefore, if I left something off of this sheet, it can still be on the exam. There will be no multiple-choice questions. Most of the questions will be like the ones in the homework assignments, and possibly a few definition questions, but I am more likely to ask questions that make you use the definitions rather than recite them. I will probably ask one of the questions from the book at the end of the chapters.

The review session will be at a time to be determined in class, most likely Wednesday, October 11<sup>th</sup>.

Much of Chapter 5: Know the economic reasons for **providing a legal system, promoting competition, providing public goods, and income redistribution**. Know what **government sponsored** and **government deterred goods** are. What is the difference between **voting** and **spending**?

Chapter 6: How do we calculate **marginal tax rate, average tax rate, and total taxes paid**? What is meant by **proportional, progressive, and regressive taxes**? What is the **tax base**? How can increasing a tax result in less revenue? What are **sales, excise, ad valorem, and specific (unit) taxes**? Who pays the tax? What is the **Laffer Curve**? The book actually draws it in Chapter 13. What are **Medicare and Social Security**? What are their effects on the economy? What is the problem with Social Security? What are some of the proposals for solving the problem? What are the pluses and minus of using each “solution”? I am most likely to give you a proposal for a solution and ask you how it would work, and whether or not you would implement my proposal.

Chapter 7: What are, and how do we calculate, the **unemployment rate, labor force participation rate, and inflation rate**? What are **stocks and flows**? How do they relate to unemployment rates? Know how to classify people by the reason they are unemployed, i.e., laid off, job leaver, etc. Know how to tell who is in which category of unemployment, i.e., **frictional, structural, seasonal, and cyclical**. What is the **natural rate of unemployment, a.k.a., full employment unemployment rate**? How do **discouraged workers** and **underemployment** complicate the unemployment picture? What are the other costs of unemployment besides lowered production? How do we calculate **CPI, PPI, PCE Index and GDP deflator**. I won't ask you to do the calculation, but you may have to describe how it is done. Know how to calculate inflation from those numbers. Why does it matter if inflation is anticipated or unanticipated? What are the **costs of unanticipated and anticipated inflation**? (I added **shoe leather costs to menu costs**.) Note that if inflation is expected to be 10% and it ends up being 7%, we had unexpected **deflation** of 3% and that hurts borrowers and any others paying a fixed amount but helps those receiving the money. Know what an **expansion (a.k.a. boom), contraction, recession, depression, trough, and peak** are. What is a **leading indicator**?

Chapter 8: What do we mean by **product markets** and **factor markets**? Know what is calculated in **GDP** and what is not. That method is the **expenditure method (C+I+G+X)**. Remember that “X” can be negative and that *you are likely to get the definition of “I” wrong. Stocks and bonds are not investment.* Ignore inventory investment. It is very small and confusing. Why should GDP calculated this way equal the **sum of the incomes and the sum of the value added**? What are some problems with trying to calculate GDP? What are some of the limitations in our understanding the meaning of different levels? How do we calculate **GDI, NDP, NI, PI, and DPI**? What is the difference between **real and nominal**

**GDP?** Ignore the chain-weighted measure for real GDP. How do we compare GDP across countries?

Much of Chapter 9: What is **economic growth**? What are the negative effects of economic growth? What is the problem of using this as a measure of welfare? What causes GDP per capita to grow? Why do small changes in the growth of GDP matter? Why should you start saving for retirement now? What is **labor productivity** and what changes it? Why is **saving** so important to growth? What is **human capital**?

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Non-graded Homework Assignment #6A to be reviewed with Assignment #6.

1) (10 points each) For each event, determine how much the American GDP changes and which part of GDP changes. Explain your logic. If you do not use a number, explain why that does not affect GDP.

A) The government sends your grandparents (assuming they American) a Social Security check for \$400.

B) A few years ago, Bethany College repaired the roof of Richardson. I do not know how much it cost. Let's assume that it cost \$12,000.

C) You buy \$10,000 worth of stock in IBM because you think they will excel at AI. You pay \$5 in commissions.

D) I just bought \$75 sneakers made in Viet Nam. I bought it from an American company, Nike. Suppose that Nike paid the Vietnamese \$50 for it.

2) (10 points) To retire and keep your standard of living, you need to save 20 times your annual income. Suppose your retirement fund earns 6% interest and if you earn \$50,000/year. If you save for 40 years, you need to save \$502.14/month. If you save for 30 years, you need to save \$1070.05/month. There are two reasons why the extra 10 years greatly reduces how much you have to save. What are the two reasons? Explain your logic. (Note that this means you should start saving for retirement today.) The three articles below discuss how to know if you save enough for retirement and how to motivate yourself to save. The first one is best. The second one is basically and advertising for an app. I have one problem with it. If you only save 10x your income, you cannot keep your standard of living unless you either are earning 10% per year or you draw down your assets. Therefore, the chart does not have you saving enough so that app is probably a bad idea, but their steps on saving are good (except Step #4). The third one basically says most advice on how to save is bad and people are not saving enough.

<https://getpocket.com/explore/item/the-best-advice-for-saving-as-much-as-you-can?>

<https://www.pocketnest.com/post/how-much-should-i-be-saving-for-retirement>

<https://www.psychologytoday.com/us/blog/the-science-behind-behavior/201601/why-saving-goals-don-t-always-help-consumers>

3) (15 points) Developing countries complain the GDP systematically underestimates their production. Explain their logic.

4) (35 points) Suppose in an economy, consumers spend \$1000; firms bought \$300 worth of new machines and kept \$20 of retained earnings; the government spent \$400 on salaries and \$450 worth of Social Security; we imported \$150 worth of goods and exported \$100 worth of goods; machines had wear and tear of \$30; and companies paid \$40 in profit tax while consumers paid \$200 in income tax. Calculate GDP, NDP, NI, PI and DPI. Write all equations used and show all work. If you need a number which is not provided, assume it is zero.